

# VBk Practical Mathematics and Microsoft Excel Course



**Pie charts**



WINCHESTER  
COLLEGE

The screenshot shows the Microsoft Excel interface with the 'Insert' tab selected. The 'Pie' button in the 'Charts' group is highlighted, and a dropdown menu is open showing '2-D Pie' and '3-D' options. A tooltip for the 'Pie' chart is visible, explaining its use for displaying the contribution of each value to a total. Below the menu, a data table is shown with columns for 'Company' and 'Sales /£Millions'.

	Company	Sales /£Millions
4	Brand Y	20
5	Acme	100
6	Greycorp	60
7	Banana	47
8	Macrosoft	92
9	Froogle	6

**Pie charts** are often used to visually represent the proportions of a data set assigned to a finite set of *classes*. (i.e. named categories).

They are used extensively in finance and retail, where 'market share' is one of key metrics for assessing the success of a company, and hence the bonus of the Chief Executive ...!

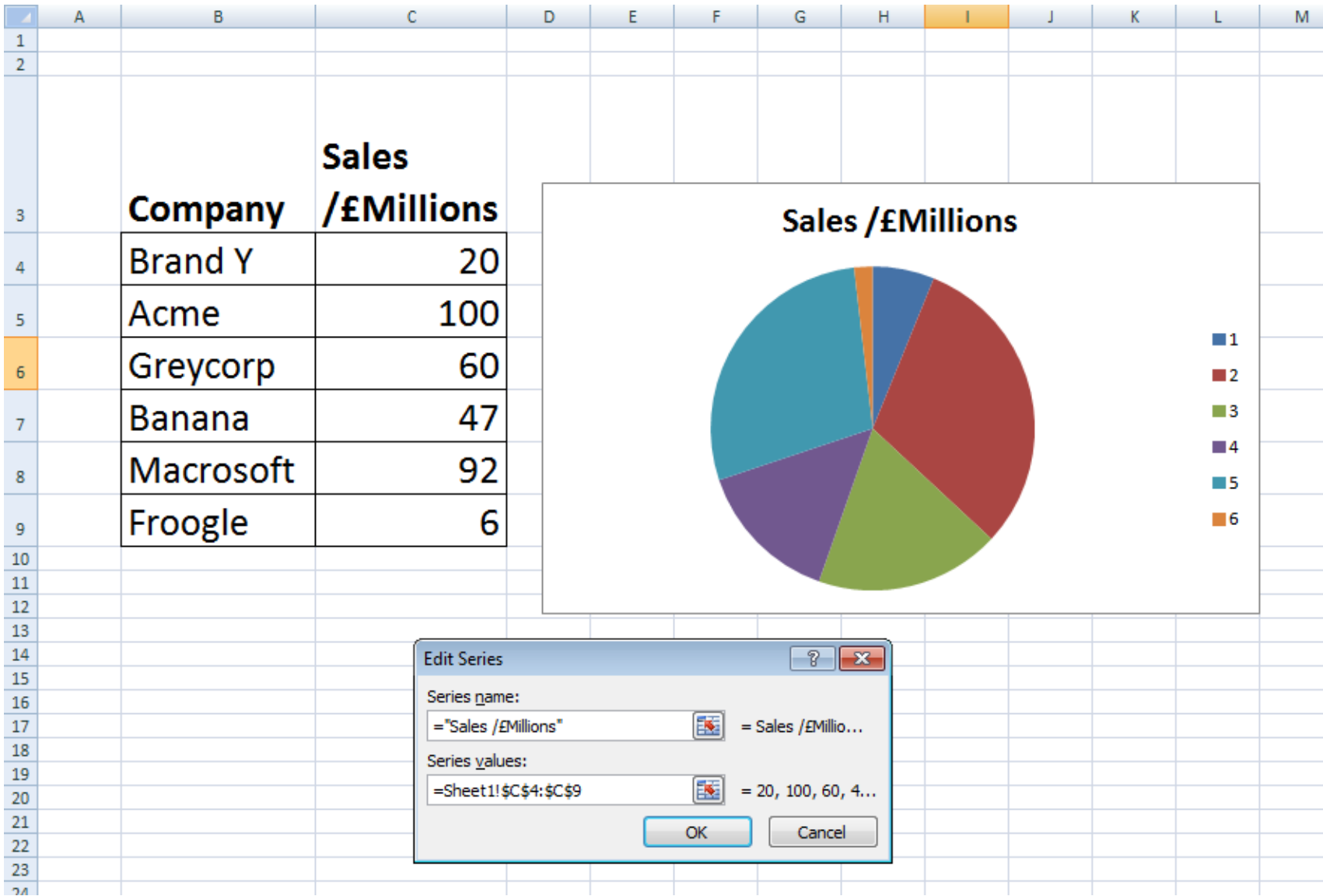
To create a **Pie Chart**, firstly create a data table in Excel. You will need a column of names and a corresponding column of numbers. The pie slice associated with each name will have angular width in proportion to the number divided by the sum of all the numbers. In the example above, 'Acme' would have a pie slice of  $360^\circ \times 100 / 325 = 110.8^\circ$ .

Then click on the **Pie** button in the **Insert** section of the Excel 'ribbon.'

The screenshot shows the Microsoft Excel interface with a data table and a chart. The 'Chart Tools' ribbon is highlighted in red. A context menu is open over a white box, with 'Select Data...' highlighted.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2														
3		<b>Company</b>	<b>Sales</b>											
4		Brand Y	20											
5		Acme	100											
6		Greycorp	60											
7		Banana	47											
8		Macrosoft	92											
9		Froogle	6											
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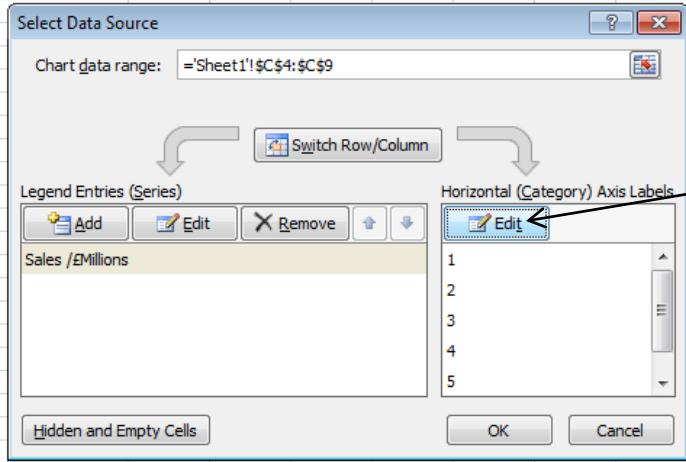
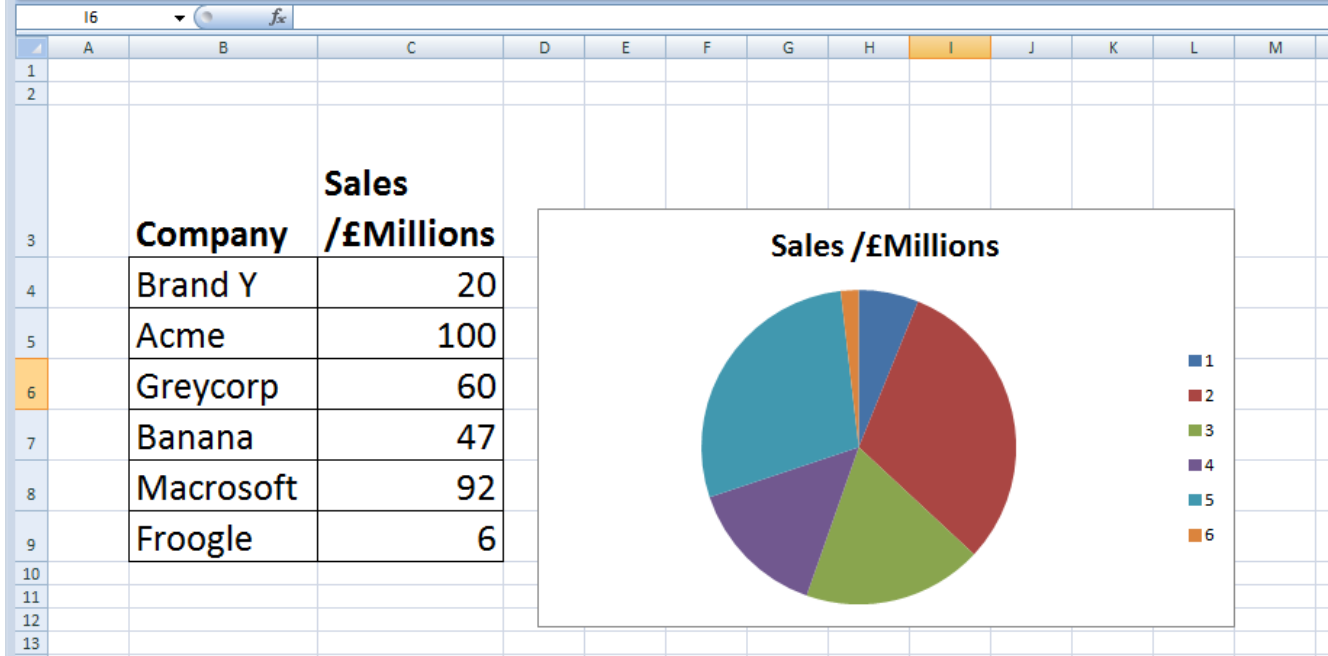
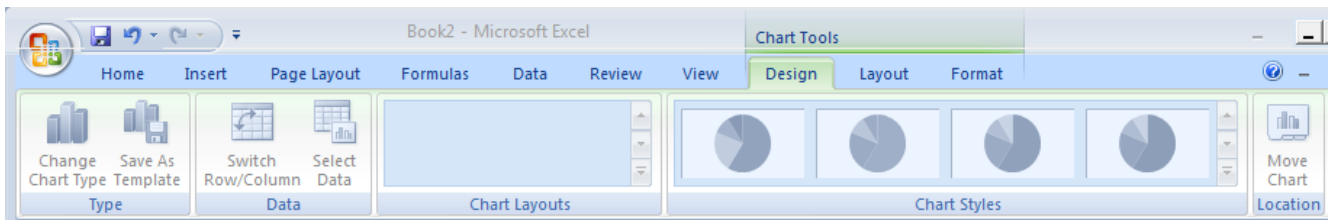
Right click in the white box which will have now appeared. Choose **Select Data ...** from the menu. Note **Chart Tools** will have now appeared as an extra option in the ribbon icon bar.



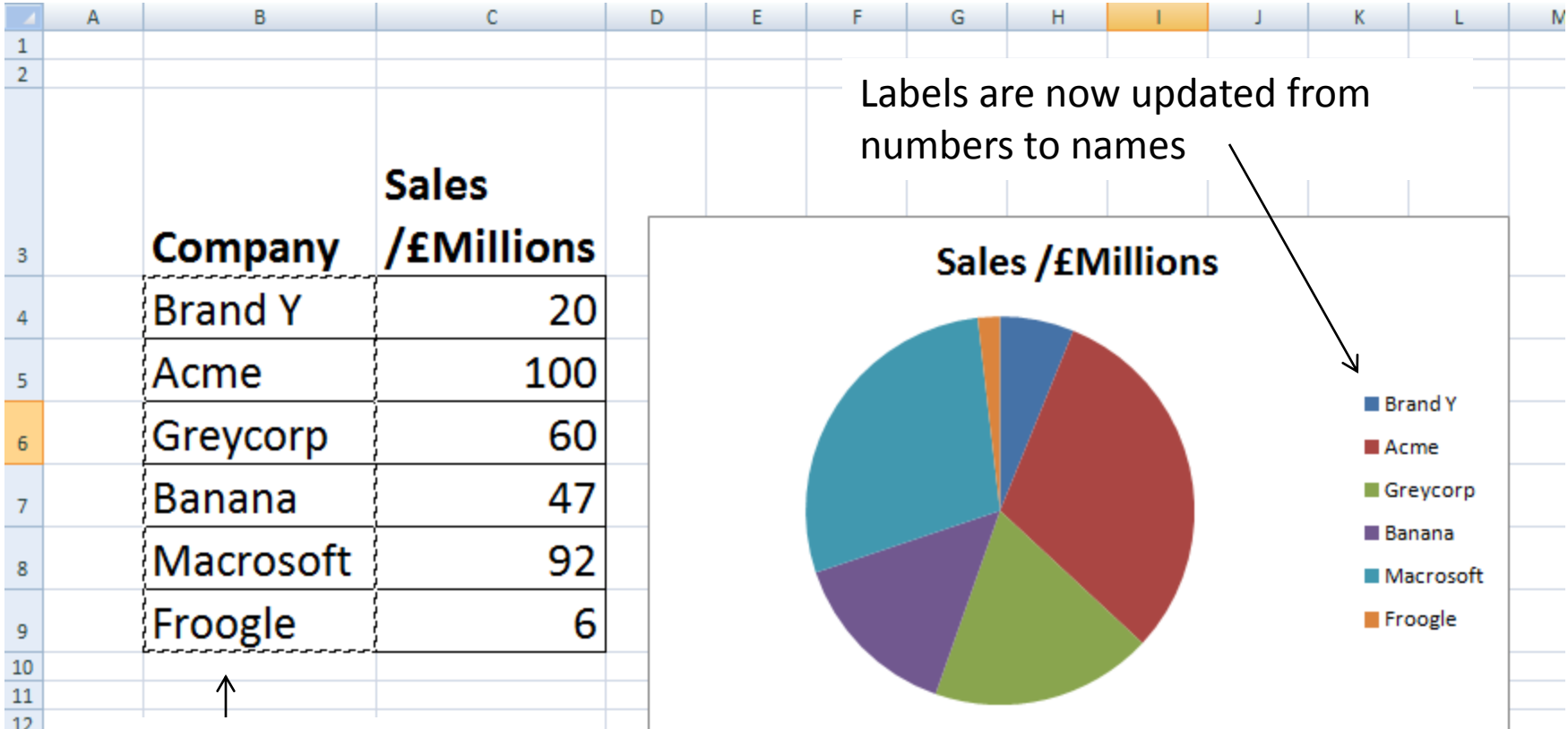
Follow the prompts and assign a range of data to **Series values**.

In this case the code is **= Sheet1!\$c\$4:\$c\$9**

which means "Worksheet1, cells C4 to C9." The pie chart should appear in the white box.



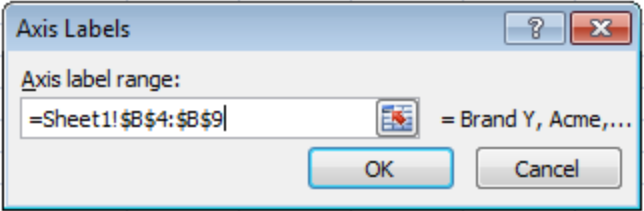
Edit the **Horizontal (Category) Axis Labels** to associate names to the pie slices.



Labels are now updated from numbers to names

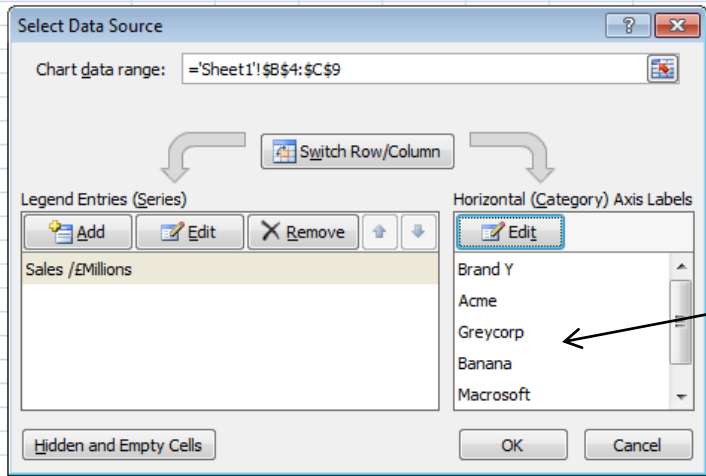
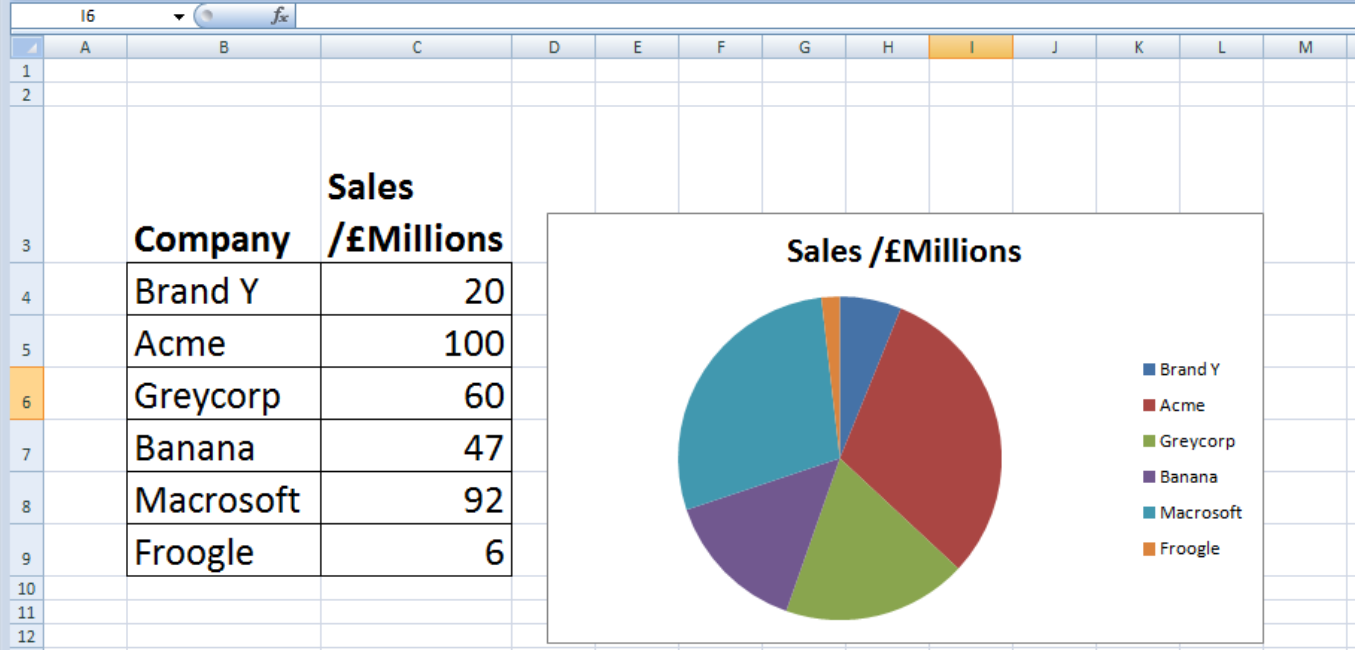
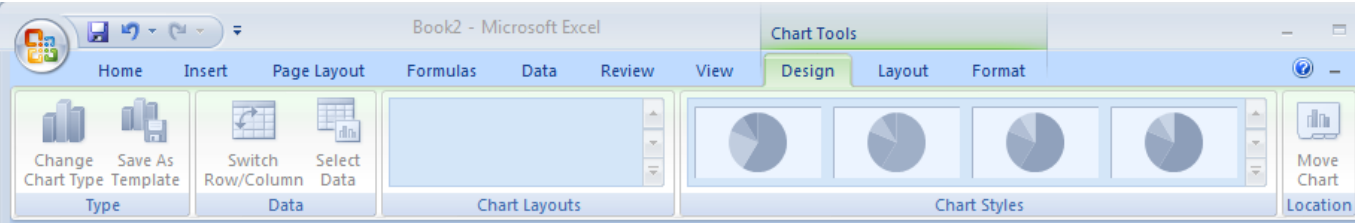


This can be done by typing a range into the **Axis Labels** box, or by dragging a box over the desired column of cells.



In this example the cell range is **B4 to B9**

i.e. code is  
**= Sheet1!\$B\$4:\$B\$9**

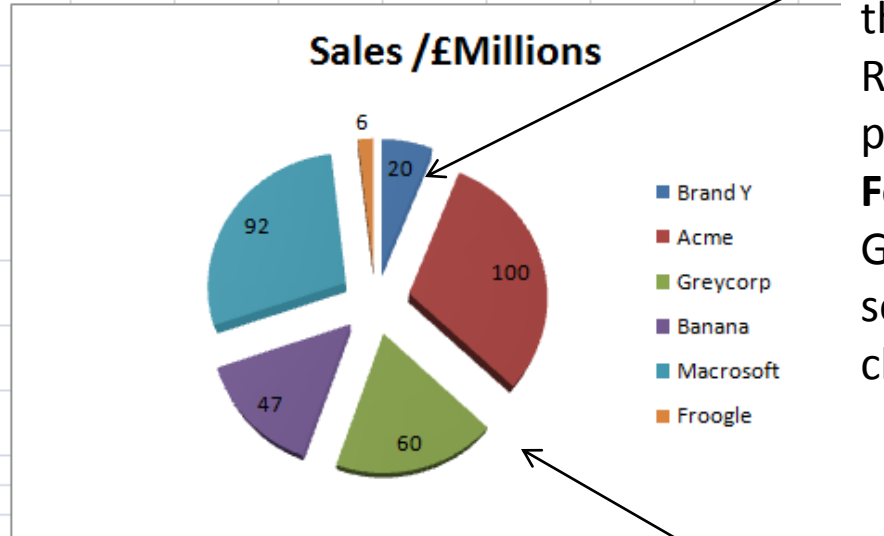


Labels are now updated from numbers to names

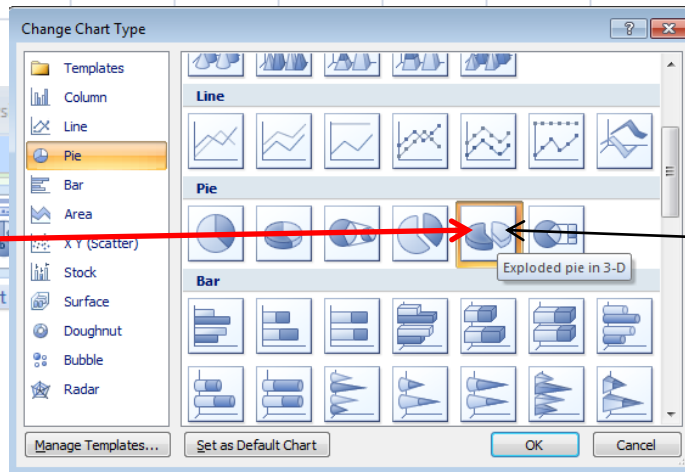
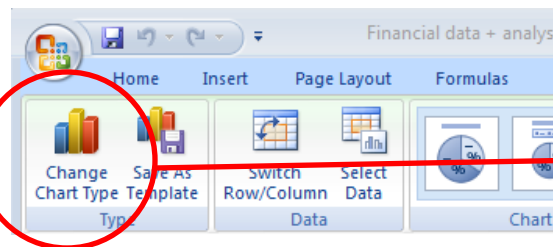


For Excel élan, use the **Chart Tools** ribbon (and also the options in the context menu which will appear if you right click over the Pie Chart) to enhance the appearance of you Pie Chart . Does your information *make sense at a glance*?

Company	Sales /£Millions
Brand Y	20
Acme	100
Greycorp	60
Banana	47
Macrosoft	92
Froogle	6



Display numbers on the pie slices. Right Click menu on pie chart. Select **Format Data Labels ...** Go to **Label Options** section. Select **Value** check box.



Change Pie Chart to the 'exploded' version